

Application No. 09/688,213

Docket No. 00-VE15.17

**AMENDMENTS TO THE SPECIFICATION**

A. In the specification please replace the Title of the Abstract on page 65 of the specification with the following:

**CONGESTION ~~AND~~ AND THRU-PUT  
VISIBILILTY ~~AND~~ AND ISOLATION**

B. In the specification please replace the paragraph beginning at page 1, line 2 and ending at page 1, line 5 (the paragraph begins with "This application is ..." and ends with "...entirely by reference.") with the following paragraph:

This application is a continuation in part of U.S. Patent Application Serial No. 09/635,695, filed August 10, 2000 entitled "SUPPORT FOR QUALITY OF SERVICE ~~AND~~ AND VERTICAL SERVICES IN DIGITAL SUBSCRIBER LINE DOMAIN" (~~attorney docket no. 50107-458~~), the disclosure of which is incorporated herein entirely by reference.

C. In the specification please replace the paragraph beginning at page 2, line 16 and ending at page 2, line 22 (the paragraph begins with "A number of ..." and ends with "...xDSL technologies.") with the following paragraph:

A number of technologies are being developed and are in early stages of deployment, fro providing substantially higher rates of data communication, for example ranging ~~from~~ from 640 kb/s to 7.1 Mb/s. For example, cable television companies are now beginning to offer 'cable modem' services, which allow customers to communicate data over available bandwidth on the coaxial cable of a cable television network. After considering several other options, a number of the local telephone carriers are working on enhancements to their existing copper-wire loop networks, based on various xDSL technologies.

D. In the specification please replace the paragraph beginning at page 16, line 19 and ending at page 16, line 29 (the paragraph begins with "A further aspect ..." and ends with "...common machine.") with the following paragraph:

A further aspect of invention relates to the unique software for implementing the automated ~~isolation~~, testing and monitoring of connectivity, congestion and throughput. A software product, in accord with this aspect, includes at least one machine readable medium

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and programming code, carried by the medium. In the preferred embodiment, the code actually includes several applications, at least one of which runs on a server in the vertical services domain and at least one of which runs on a client computer. The client computer may be a technician's unit operating from the vertical services domain or elsewhere, or may be an emulation thereof running on the server itself. In at least one embodiment, the client application runs on a customer's machine. As such, these applications may reside in separate media and run on two or more computers or other network nodes, although the inventive concept encompasses operation from a single, common machine.

E. In the specification please replace the paragraph beginning at page 28, line 24 and ending at page 28, line 29 (the paragraph begins with "The queuing will ..." and ends with "...Weighted Random Early Discard (WRED).") with the following paragraph:

The queuing will be done based on customer and network provider determined rules so that contention for the facilities facing the subscriber will be addressed via the dropping of the appropriate packets. That way an inserted video stream doesn't overwhelm a PPPoE or ~~V~~voice stream (due to facility limitations). Among others, appropriate industry understood methods for accomplishing this queuing control include Weighted Fair Queuing (WFQ), Priority (~~PQ~~) Queuing (PQ), and Weighted Random Early Discard (WRED).

F. In the specification please replace the paragraph beginning at page 30, line 18 and ending at page 30, line 22 (the paragraph begins with "In this example ..." and ends with "...on native IP.") with the following paragraph:

In this example, the switch 19 implements the ~~D~~decision ~~P~~point 51 based on recognition of the Ethertype indicator, which is above the layer-2 ATM cell routing information. However, the switch may implement the ~~D~~decision ~~P~~point 51 based on still higher-level protocol information. Also, those skilled in the art will recognize that the concepts of the invention are applicable in networks using different protocol stacks, for example based on native IP.